DOCUMENT RESUME

ED 223 936 CG 016 345

AUTHOR Blakely, Craig
TITLE Organizational Innovations: What Have We Learned?
SPONS AGENCY National Science Foundation, Washington, D.C.
PUB DATE Aug 82
GRANT NSF-ISI-7920576-01
NOTE 23p.; Paper presented at the Annual Convention of the American Psychological Association (90th, Washington, DC, August 23-27, 1982).
PUB TYPE Information Analyses (070) -- Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Change Strategies; Innovation; Operations Research; *Organizational Change; *Organizational Effectiveness; Organizational Theories; Program Development; *Program Implementation; *Program Improvement; State of the Art Reviews
IDENTIFIERS *Research Develop Diffuse Adopt Model

ABSTRACT

In the last two decades, increasing concern has been expressed about the ability (or inability) of various governmental agencies, service organizations, and manufacturing organizations to effectively perform their tasks. Psychologists have only recently become involved in researching issues concerning the adoption, implementation, and routinization of innovative programs for such organizations. Much of their research efforts have been guided by a desire to provide a true test of the modified Research Development and Diffusion (RD & D) model of producing organizational change. Much of this research, focusing on the Adoption Phase or the process of persuading organizations to adopt innovative ideas, has identified four major concerns: (1) the expense associated with program implementation; (2) changes in role or role relationships required by implementation; (3) degree to which organization members believe implementation will proceed smoothly; and (4) amount of support for the innovation from various organizational actors. Results of various studies of the Implementaton Phase and the concept of routinization suggest that the modified RD & D model is feasible as a means of bringing about large-scale organizational change. The findings suggest that future efforts must be longitudinally based, focusing on each phase of the change process. (PAS)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED223936

Organizational Innovations:

What have we learned?

Craig Blakely

Michigan State University

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

X This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Craig Blakely

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

CG 016345

Paper presented at the 90th annual convention of the American Psychological Association, Washington, D.C., 1982. This work was completed under a grant from the National Science Foundation #ISI-7920576-01.

Organizational Innovations--What Have We Learned?

Throughout the last two decades, there has been increasing concern expressed about the ability (or inability) of various governmental agencies, service organizations and manufacturing organizations to effectively perform their tasks. Examples abound, witness the political unrest of the 1960's, the ever falling achievement test scores of our elementary and secondary students, the hard times facing the American automobile industry, etc. Clearly, organizations are continually ripe for change. Implicit in this demand for change is the assumption that organizational service provision or output will be improved following the adoption and implementation of successful innovations. In fact, if an innovation is defined as anything new to an organization, the only way organizations change is through innovation. These demands for change must counteract the naturally occurring forces operative within the organization that seek homeostasis (Katz & Kahn, 1978). Our efforts have been guided by a desire to provide a true test of the modified Research Development and Diffusion (RD&D) model of producing organizational change. As should be apparent from the previous speakers' comments, the process of organizational change is indeed complex (Emshoff, 1982; Gottschalk & Schmitt, 1982; Roitman & Mayer, 1982; and Nickel & Davidson, 1982).

The purpose of my concluding comments will be to provide a summary of what we have learned regarding the process of inducing organizational change. I shall provide a brief summary of the relevant literature while attempting to refrain from becoming redundant and will then summarize our own findings and provide some suggestions for future research efforts.

The Adoption Decision

The bulk of research on the RD&D model has focused on the Adoption Phase or the process of persuading organizations to adopt innovative ideas (Tornatzky & Klein, 1981). Many researchers have discussed critical variables in the adoption process. Yin (1977), for example, suggested that there are both characteristics of the organization and characteristics of the innovation that influence the adoption decision process. In general, he suggested that organizations can be classified as primarily concerned with either product efficiency or bureaucratic self-interest. Organizations that are concerned with product efficiency strive to improve their product or service delivery. They are reactive to external environmental demands coupled with their own need to change to meet those demands. Organizations characterized by bureaucratic self-interest are frequently more concerned with the incorporation of the innovation into their organizational repertoire rather than with improving their services per se. The organization is frequently in a growth phase, thus experiencing an increase in both staff and programs. In these situations it is often the case that the innovativeness of the program is not the issue at all. Rather, an administrator might prefer to adopt and implement a relatively ambiguous program that would merely appear to be effective and take advantage of this perceived success for personal gains. In addition, Yin suggested that excess resources, flexibility and creativity are organizational characteristics that influence the adoption decision.

Yin also outlined the advantage inherent in the innovative program over those of existing alternatives--the visibility of a program (particularly in product efficient organizations), the reversability of an innovation (the capability of adopting a program and deciding to terminate it in the near future without incurring great cost), the change in staff roles

required by the innovation, and the cosmopolitan characteristics of the innovation and/or innovator as all operative in the adoption decision process.

Pincus (1974) added bureaucratic safety to the list of organizational characteristics that influence the adoption decision. He suggested that organizations respond to external pressure but avoid accountability. Organizational decision makers seek highly visible, state-of-the-art innovations that are efficient and will provide peer approval. Still others have suggested that the compatability of the innovation with the organization, the complexity of the innovation (Hall & Loucks, 1978), the cost of the innovation and its succeptability to modification all figure in the adoption decision (Zaltman, Duncan & Holbet, 1973).

Thus, the literature suggests that there are numerous characteristics of both the innovation itself and the organization contemplating adoption that are operative in the decision making process. Ultimately, the interface or interaction between both sets of characteristics proves to be critical. Clearly certain programs are designed to be implemented within certain environmental contexts. Attempts to provide global predictors of the adoption decision have to date provided extremely varied results. In fact, some (e.g., Downs & Mohr, 1976) have implied that the task is fruitless given the variability observed to date. Though the bulk of their comments are warranted and their suggestions for future design considerations should be considered, we prefer the position advocated by Tornatzky and Klein (1981) who suggested that this variability is due to inadequate research designs having been employed in the vast majority of studies completed to date.

Our own research efforts (see Gottschalk, 1982) yielded four salient reasons that organization respondents frequently cited as critical to the adoption decision: (1) the expense associated with the implementation of the program and the related concerns of the perceived feasability of

obtaining internal or external resources sufficient to cover this expense; (2) changes in roles or role relationships required by the implementation of the program; (3) the degree to which organization members believed implementation of the program would procede smoothly; and (4) the amount of support for the innovation from various organizational actors. Though we don't have any concrete figures to substantiate this conclusion, it appears to be the case that tightly bundled innovations are more likely to be adopted for reasons related to the expected ease of implementation. On the other hand, organizational support was more critical when deciding to implement loosely bundled innovations.

Thus we have identified four major concerns that appear to relate to the adoption decision. As Downs and Mohr (1976) have predicted, differences were found between innovations. However, why should one anticipate a different weighting of reasons for different programs, with different actors involved, in different organizational settings, in different environments, etc.?

Implementation

The current state of the art as it applies to the issue of implementation can best be described as a bi-modal continuum ranging, on the one hand, from those advocating strict adherence to the original innovation model to, on the other hand, proponents of the reinventionist perspective. The former group has suggested that the original innovation went through rigorous evaluation prior to dissemination and, thus, variants from the original model may suffer from a loss in outcome effectiveness (Havelock, 1969; Boruch & Gomez, 1977; Calsyn, Tornatzky, & Dittmar, 1977). Pro-adaptation researchers have argued that differing organizational contexts and program needs demand on-site modification of the innovation virtually without exception (Berman & McLaughlin, 1978; House, Kerkins, & Steele, 1972). Hall and Loucks (1978) advocate a more moderate position. They suggested

that adaptation is acceptable up to a "zone of drastic mutation" at which point the innovation loses its integrity. Recent policy trends have been heavily influenced by the massive pro-adaptation RAND study (Berman & McLaughlin, 1978). However, recent criticisms have called attention to several shortcomings of this research effort (Datta, 1981). According to Datta, the RAND findings that "mutual adaptation" (of site and program) generally characterizes successful implementation is supect. Although the authors claimed that actual program replication rarely occurred, their implementation outcome measure was "the extent to which projects met their own goals" (Berman & McLaughlin, 1977, Vol. VII, p. 50). This definition of implementation builds the occurrence of adaptation into the results. Secondly, the "programs" examined by the RAND study were never specified sufficiently to enable "high fidelity" implementation. Finally, the "massive infusion of federal dollars," reputed to characterize the Office of Education programs which were studied averaged $100.00 per pupil per year across programs. This is hardly a great expense when the extent and the complexity of the changes which were to be produced is considered.

In fairness to Berman and McLaughlin, it should be recognized that these researchers did not attempt to confuse their "project-based" implementation measure with the concept of fidelity. However, as noted by Datta (1981), others have seized upon the RAND findings concerning the prevalence of "mutual adaptation, cooptation, and non-implementation" to support the dismantling of RD&D efforts. It is hoped that the present discussion will help rectify this confusion. The more defensible position would be to suggest that the modified RD&D model has never been adequately put to the test.

In any case, an operationalization of implementation and the development of an adequate assessment method has become essential. Leithwood and

Montgomery (1980) rationally developed a set of eight dimensions generally descriptive of educational curriculum innovations. As Roitman and Mayer (1982) have outlined, Hall and Loucks (1978) have defined innovations as a set of finite components and have advocated the use of innovation specific indices of degree of implementation. They also suggested using adopters' input in defining acceptable variants of specific components. We have restricted adopters to an assistance role only. That is, we suggest that in assessing the true fidelity of an implementation one must use developer defined criteria in determining the acceptable limits of variations of components or the "zone of drastic mutation."

Our own results (Roitman & Mayer, 1982) provide strong support for a moderate pro-fidelity perspective. That is, well specified innovations can be adopted and implemented within developer defined acceptable bounds. It should be noted that developer defined acceptable bounds typically provide a more conservative test of the viability of the applied RD&D model than strategies such as those proposed by Hall and Loucks (1978). That is, developers, with their inherent concern for the ownership and integrity of the innovative program, should be more inclined to place the zone of drastic mutation at a higher level of fidelity with respect to the original model than would adopters of the program.

Routinization

Several authors have been heavily involved in the development and measurement of the concept of routinization (Yin, 1978a; Berman & McLaughlin, 1978; Goodman, Bazerman, & Conlon, 1979; Glasser & Backer, 1980; and Glasser, 1981). Routinized programs are programs that are incorporated into an organization's daily routine. They become standard practice. They are robust and they tend to be durable until they enter into competition with an improved innovative alternative. Yin has developed the most extensive and

widely referenced process model for assessing routinization. He sees successful implementation as ultimately culminating in routine use on a permanent basis. Yin (1978a) proposed a model in which the process of routinization is viewed as a series of passages and cycles that must be completed. He outlined ten passages and cycles that are operative in the routinization process: (1) the survival of equipment turnover; (2) the passage from soft, external (grant) support to hard, local support; (3) the establishment of appropriate organizational status of innovation program staff; (4) the normal supply and maintenance of essential materials and equipment; (5) the incorporation of program functions in job descriptions and hiring prerequisites; (6) use of the innovation becomes part of statute, regulations, bylaws, etc.; (7) programs skills become part of professional standards, staff training, etc.; (8) the program survives the promotion of key personnel; (9)the program survives the introduction of new staff; and (10) the innovation attains "widespread use" within the organization. He saw each in simplified form as a dichotomous question: Has the innovation passed through this phase or not? Thus, the extent of routinization could be conceived of as a simple sum of the number of passages and cycles completed.

Our own findings (Nickel & Davidson, 1982) suggest that these passages and cycles make a great deal of conceptual sense yet they do not necessarily intercorrelate highly. That is, the passages and cycles are not internally consistent. However, degree of routinization as measured by passages and cycles is perhaps justifiably lacking in internal consistency given the data set upon which our calculations were based. If one conceives of each passage and/or cycle as potentially occurring independently of one another termporally, innovations that have been implemented by organizations for a shorter period of time might have passed through few of these phases; thus,

increasing the error in the corrected item total correlations. In any case, we did discover that routinization scores based on Yin's passages and cycles did relate to other measures.

Many indicants of routinization have been suggested (note the characteristics of innovations and organizations that figure in the adoption decision as outlined above). However, one important variable that Yin suggested as unrelated to routinization was fidelity of implementation (Yin, 1978a). That is, he suggested that innovations can become fully routinized regardless of the fidelity of implementation or even the effectiveness of the program. It is to the interrelationships of these variables that we now turn our attention.

The interface of adoption decision, fidelity, routinization and outcome

As mentioned by the previous speakers, information was gathered on an initial Phase One sample of 160 adopting organizations, a Phase Two sample of 144 organizations, and a final Phase Three sample of 70 site-visited adopters on various aspects of the RD&D process. Four predictors of the adoption decision were identified: (1 cost) the cost of implementing the program in conjunction with the organization's ability to generate internal or external sources of program support; (2 Rolechange) the extent to which changes in organizational roles are required by the adoption and implementation of the innovation; (3 smooth imp) the extent to which organizational actors see the innovation as one that could be smoothly implemented in the organization; and (4 support) the extent to which organization members and administrators were supportive of the innovation. Eight of Yin's (1978a) passages and cycles applied to both the second and third phases of the research project: (1 soft hard) the transition from soft external funding support to hard local support; (2 supplies) the extent to which supplies and materials required to implement the program are obtained through standard

organizational procedures; (3 job descriptions) the extent to which job descriptions and hiring decisions stress knowledge and skills required by the innovation; (4 status) the extent to which implementation of the program is mandated by organizational policy or local, state or federal statute; (5 training) the extent to which new staff are trained in the implementation of the innovation as normal job skills; (6 promotions) the extent to which key individuals in the implementation of the innovation have been promoted within the organization; (7 replacement) the extent to which key individuals in the implementation of the program have left the organization and been replaced by new staff; and (8 widespread) the extent of widespread use of the innovation within the organization. These eight passages and cycles were dichotomously coded and a total routinization score was computed for all 70 Phase Three site visited organizations. Extensive development of degree of implementation or fidelity measures was undertaken and total fidelity scores were calculated (average item) for each organization. These scores were then standardized within each of the seven innovation areas to facilitate across innovation comparisons. Finally, outcome data was gathered from as many of the organizations as possible (Roitman & Mayer, 1982). The organizations were ultimately ranked and standardized on outcome within innovation category.

Table 1 shows the intercorrelations of fidelity and outcome with the predictors of the adoption decision and the routinization variables from the Phase Three site visited organizations. It should be noted that fidelity and outcome were highly correlated. Additional trends suggest that the availability of financial resources and the support of organizational staff as reasons for adoption are positively related to fidelity as well. That is, organizations with staff that are supportive of the innovation model prior to implementation and that have the financial

resources to implement the program are likely to do so with fidelity, while organizations without the a priori support of staff and those lacking assured financial resources to implement the program are more likely to cut corners during implementation.

Table 1 also shows a nearly significant negative relationship between organizational policies or governmental statutes mandating the implementation of the program (statute) and the fidelity with which it is implemented. One might postulate that organizations under these circumstances might be operating more out of bureaucratic self-interest than out of concern for improving service delivery or products. Thus, incorporation (self-interest) is more important than outcome and/or fidelity (Yin, 1978a).

The replacement of departed staff is also nearly significantly and positively related to both the fidelity of implementation and the outcome effectiveness of the implementation. That is, the more that personnel were replaced or promoted, the more likely it is that the program was implemented with high fidelity and therefore effective. Since training is not related, one cannot suggest that the recruitment and training of new staff invested in the model innovation is operative here per se. However, it may be that staff burnout is avoided through staff turnover. This in turn could be related to routinization and ultimately to maintained fidelity and outcome effectiveness of the implementation of the innovation.

Table 2 provides the intercorrelation matrix between the adoption decision predictors and the routinization variables from the Phase Three site visited organizations. The availability of the requisite financial resources to implement the program as a reason for adoption was negatively related to the promotion of key actors and marginally and positively related to the innovation's widespread use. Though only correlational data, the latter is no doubt indicative of the necessity of financial resources

to bring about widespread implementation of an innovation. The former is hard to explain. One might suggest that the bulk of financial availability problems were solved through external soft monies. Consequently, the promotion of key individuals in the program from soft to hard money positions does not necessarily follow. In any case, the relationship poses a question worthy of more attention.

The fact that role change as a predictor of adoption was negatively related to organizational policies or statutes requiring implementation makes conceptual sense. Rarely do statutes or organizational policies require role changes. It may also be the case that policies or statutes required staff to assume similar roles prior to adoption. For example, Title I may have demanded a reading specialist within a school before the implementation of HOSTS per se. A school not impacted by policy or statute may have had no such role beforehand.

The requirement of role changes as a reason for adoption was also positively related to the replacement of staff and the widespread use of the program. Certainly some staff would react negatively to required role changes and they would likely leave. Frequently, replacement of staff fulfills the same function as a formal change in roles or role relationships. In addition, by requiring a change in roles and role relationships of staff, widespread use would be greatly facilitated simply through the diffusion of staff throughout the organization.

The perceived smooth implementation of the innovation within the organization was positively related to the promotion of key individuals involved in the implementation of the program. If the key individuals were correct in predicting ease in implementation, the chances were greater that the organization benefited in some way from the implementation and, thus, the individuals' probability of promotion was likely to be enhanced accordingly.

The support of organizational actors as a reason for adoption was marginally related to statutes or policies requiring implementation and significantly related to the replacement of staff who left the program. The latter seems clear. Strong organizational support for a program suggests that all possible efforts were undertaken to replace departing staff and insure the longevity of the program. Of course, strong organizational support may also have led to organizational policy statements requiring continued implementation of the innovation.

Summary and Implications

Psychologists have only recently become involved in researching issues concerning the adoption, implementation and routinization of innovative programs (Yin, 1978b). We were driven by our dissatisfaction with the current policy of discarding the modified RD&D model in favor of a decentralized pro-adaptation position without first providing an adequate test of the modified RD&D model. These results clearly support the notion that a modified RD&D model is indeed feasable as a means of bringing about large scale organizational change. Well specified programs can be adopted and implemented within conservative developer-defined acceptable bounds of fidelity. Certain characteristics of both innovations and adopting organizations as well as their interfaces are indeed related to the ultimate decision to adopt innovative programs. Several of these characteristics also seem to be related to the fidelity of the implementation, the outcome effectiveness of the implementation and the routinization of the innovation within the organization. As Yin (1978a) has suggested, routinization appears to occur independently of the fidelity with which the program is implemented. However, fidelity is related to the ultimate effectiveness of the implementation. As Tornatzky (1981) has so succinctly put it, fidelity

must become the covariate of choice. Process measures should become integral to any future major organizational impact evaluations.

We, as applied organizational psychologists, must continue to add to the global data base such that the theoretical relationships between adoption, implementation, reinvention, and routinization become more clear.

We, as innovative program evaluators, have been more concerned with the elegance of our designs than with the production and marketability of our findings. As we move forward in the study of these policy relevant issues we must abandon our naive perspective suggesting the ethical independence of the researcher and the policy arena. Rather, we must become proactive in our efforts to ensure the impact of our discoveries. As Emshoff (1982) has just suggested and Lawler (1982) so succintly stated, we must become more externally directed and involved in the legislative process mandating the adoption and implementation of innovative programs. In addition, this proactive concern with the impact of our findings should focus on all levels of analysis. Not only should we be concerned with global policy impact, we must also strive to offer assistance to adopting organizations. Since reinvention is inevitable to some degree, yet fidelity of implementation is related to the outcome effectiveness of the adoption/implementation, we must assist adopters in avoiding the zone of drastic mutation. The initial evaluation of innovative programs must focus a great deal of attention on process measures designed to identify the core components of the model that relate to the effectiveness of the program. We must also offer iterative evaluation assistance to adopters such that the impact of their own local adaptations can be readily determined. In short, we must become active in all phases of the RD&D effort.

Limitations and Future Directions

Our current work can be characterized as an exploratory attempt to add

to the data base in this field. Certainly there have been some design flaws and limitations to the current work that should be noted. First, this has not been a true predictive or concurrent study of the adoption decision. Adopters were identified several years after the fact through developer provided lists of organizational contacts. Thus, not only was the adoption decision data collector aware of the decision status of the organization, but the data set was based on information and decisions that had occurred several years past. Second, though every effort was used to ensure the compatability of the fidelity instruments including the level of specificity of each component (Roitman & Mayer, 1982), a case can be made suggesting that in one program one might be measuring apples while in the next one measuring oranges. Third, the reinvention data has yet to be content analyzed. Fourth, the outcome data was frequently of poor quality and occasionally non-existent. Fifth, though this design lends itself nicely to causal modeling techniques, the data was not longitudinal in nature and the sample size would preclude any major attempt to look at the bulk of the data set. Finally, we hope not to overstep the limits of generalizability. This research effort has focused on well specified social technologies rather than on loosely bundled policy statements. Though we believe many of these findings will ultimately prove to be generalizable, these comments are an attempt to see that those utilizing this knowledge do not take it out of context to the extent suffered by the RAND research (Berman & McLaughlin, 1978; Datta, 1981).

However, we did measure the adoption decision and implementation processes independently; gather a great deal of quantifiable data; develop and use replicable measures of predictors, fidelity, routinization, etc.; study multiple innovations in two service delivery areas; observe the

process in organizational settings; and gather information from multiple sources at different levels within the organization. And finally, our reliability and validity estimates were extremely encouraging.

As any major exploratory research effort concludes, one is struck with the irony that more new questions seem to have surfaced than old questions answered. In any case, future efforts must be longitudinally based. They must begin during the early dissemination phase and track potential adopters from the point of initial contact with the program, through the adoption phase the implementation phase and the routinization process. Through these means, a true predictive paradigm can be implemented, the post hoc snap shot method and its inherent weaknesses can be avoided, and we will be able to establish a sufficient data base of quality information across organizations.

If nothing else, we have discovered that we can observe a great deal of activity and ask an incredible number of questions during any two to three day site visit. In conclusion, I would like to publicly thank the participating program developers and staff at the adopting organizations for their remarkable patience and assistance in this endeavor.

References

Berman, P., & McLaughlin, M.W. Federal programs supporting educational change, Vol. VIII: Implementing and sustaining innovations. Santa Monica, CA: The RAND Corporation, 1978.

Boruch, R.F., & Gomez, H. Sensitivity, bias, and theory in impact evaluation. Professional Psychology, 1977, 8(4), 411-433.

Calsyn, R., Tornatzky, L.G., & Dittmar, S. Incomplete adoption of an innovation: The case of goal attainment scaling. Evaluation, 1977, 128-130.

Datta, L.E. Damn the experts and full speed ahead: An examination of the study of federal programs supporting educational change as evidence against directed development and for local problem-solving. Evaluation Review, 1981, 5(1), 5-32.

Downs, G., & Mohr, L. Conceptual issues in the study of innovation. Administrative Science Quarterly, 1976, 21, 200-214.

Emshoff, J.G. Innovational processes: The issues and the research. Paper presented at the annual meeting of the American Psychological Association, Washington, D.C., August, 1982.

Glasser, E.M., & Backer, T.E. Durability of innovations: How goal attainment scaling programs fare overtime. Community Mental Health Journal, 1980, 16, 130-143.

Glasser, E.M. Durability of innovations in human service organizations. Knowledge: Creation, Diffusion, Utilization, 1981, 3, 167-185.

Goodman, P.S., Bazerman, M., & Conlon, E. Institutionalization of planned organizational change. In B.M. Staw & L.L. Cummings (Eds.) Research in organizational behavior, Vol. II. Greenwich, CT: JAI Press, 1979.

Gottschalk, R.J. The adoption, implementation, and routinization of organizational innovations. Unpublished master's thesis, Michigan State University, 1982.

Gottschalk, R.J. & Schmitt, N. Innovation adoption decisions in organizations: An empirical investigation. Paper presented at the annual meeting of the American Psychological Association, Washington, D.C., August, 1982.

Gross, N., Giacquinta, J.B., & Bernstein, M. Failure to implement a major organizational innovation. In M.R. Miles & W.W. Charters (Eds.), 691-705, Learning in social settings: New readings on the social psychology of education. Boston: Allyn & Bacon, 1970.

Hall, G.E., & Loucks, S.E. Innovation configurations: Analyzing the adoption of innovations. Paper presented at the annual meeting of the American Educational Research Association, Toronto, March, 1978.

Havelock, R.G. Planning for innovation through dissemination and utilization of knowledge. Ann Arbor, MI: ISR, 1969.

House, E.R., Kerkins, T., & Steele, J.M. A test of the research and development model of change. Educational Administration Quarterly, 1972, 8(1), 1-14.

Katz, D. & Kahn, R.L. The social psychology of organizations. New York: Wiley, 1966.

Lawler, E.E. III Strategies for improving the quality of worklife. American Psychologist, 1982, 37, 486-493.

Leithwood, K.A. & Montgomery, D.A. Evaluating program implementation. Evaluation Review, 1980, 4, 193-214.

Nickel, P. & Davidson, W.S. II Routinization of innovations: Incorporation of innovations into standard practice. Paper presented at the annual meeting of the American Psychological Association, Washington, D.C., August, 1982.

Pincus, J. Incentives for innovation in the public schools. Review of Educational Research, 1974, 44(1), 113-144.

Roitman, D. & Mayer, J.P. Fidelity and reinvention in the implementation of innovations. Paper presented at the annual meeting of the American Psychological Association, Washington, D.C., August, 1982.

Tornatzky, L.G. & Klein, L. Innovative characteristics and innovation adoption implementation: A meta-analysis of findings. IEEE transactions on engineering management, EM-29(1), 1982.

Tornatzky, L.G. Research on implementation: Implications for evaluation practice and evluation policy. Paper presented at the Evaluation Research Society, Austin, TX, 1981.

Weick, K.E. Educational organizations as loosely coupled systems, Administrative Science Quarterly, 1976, 21, 1-19.

Yin, R.K. Production efficiency vs. bureaucratic self interest: Two innovative processes? Policy Sciences, 1977, 8, 381-399.

Yin, R.K. Changing urban bureaucracies: How new practices become routinized. Santa Monica, CA: The RAND Corporation, 1978.

Yin, R.K. Organizational innovations: A psychologist's view. In R. Radnor, I. Feller, & E. Rogers (Eds.), The diffusion of innovations: An assessment. Evanston, IL: Center for the Interdisciplinary Study of Science and Technology, 1978.

Zaltman, G., Duveau, R., & Holbet, J. Innovations and organizations. New York: Wiley, 1973.

Table 1

The Intercorrelation of Adoption Decision Predictors and Indicants of Routinization With Fidelity and Outcome Effectiveness of the Implementation

	Fidelity	Money	Role Change	Smooth Imp	Support	Soft Hard	Supplies	Job Disc	Statute	Training	Promo tion	Replace ment	Wide- spread	Routin- ization
Outcome Rank	.38	-.04	-.08	-.05	.09	-.11	-.14	-.12	-.05	.08	.01	.18*	.13	.14
Fidelity	--	.18*	-.08	.04	.18*	-.01	-.05	.13	-.19*	.01	-.08	.17*	.14	-.09

All correlations are based on n's of 65-70.
The following significance levels apply.

Significance	r
.10	.15
.07	.17
.05	.20
.02	.25
.01	.31
.001	.35

Table 2

The Intercorrelation of Adaptive Decision Predictors

with Indicants of Routinization

	Money	Rolechange	Smoothimp	Support
Softhard	.04	.10	.05	.02
Supplies	.14	-.13	-.14	-.10
Jobdisc	.08	-.02	.08	-.06
Statute	-.03	-.21	.15	.15
Training	.00	.13	-.01	-.11
Promotion	-.36	-.09	.20	-.05
Replacement	-.04	.21	-.11	.25
Widespread	.16	.20	-.00	.05
Routinization	-.10	.16	-.04	.05

All correlations are based on n's of 65-70.
The following significance levels apply.

Significance	r
.10	.15
.07	.17
.05	.20
.02	.25
.01	.31
.001	.35